IN THE CLAIMS

Please amend claims 19 and 30 as follows.

Please add new claims 51-66 as shown below.

1-18. (canceled)

19. (currently amended) A percutaneous heart valve prosthesis comprising:

a valve body having a first longitudinal extremity defining a valve body first end, and [[~~an~~]] **a longitudinally** opposing second longitudinal extremity defining a valve body second end, said valve body further having a passage extending along a longitudinal axis between said valve body first end and said valve body second end, said valve being collapsible about said longitudinal axis **from an uncollapsed state to a collapsed state** for delivery via catheter; and

one or more flexible valve elements secured to said valve body and extending across said passage for blocking bloodflow in one direction through said passage;

wherein said valve body tapers linearly along its longitudinal extent**, in said uncollapsed state,** from said valve body second end to said valve body first end, said valve body first end being sized**, in said uncollapsed state,** to pass through a valve orifice associated with a heart valve to be replaced, said valve body second end being sized**, in said uncollapsed state,** so as not to pass through the valve orifice.

20. (original) The prosthesis of claim 19 wherein said valve body comprises a collapsible valve body frame formed of elongate elastic valve body elements.

21. (original) The prosthesis of claim 20 wherein said valve body frame elements are each formed of a superelastic shape memory material.

22. (original) The prosthesis of claim 20 wherein said valve body frame comprises at least three valve body sub-frame members, each said valve body sub-frame member having the general form of a deltoid, each said deltoid having acute-angled vertices at said valve body first and second ends, and oblique-angled vertices located between said valve body first and second ends.

23. (original) The prosthesis of claim 22 wherein each said valve body sub-frame member has the general form of a rhombus.

24. (original) The prosthesis of claim 22 wherein adjacent said valve body sub-frame members are joined at respective said oblique-angled vertices.

25. (original) The prosthesis of claim 24 wherein each said sub-frame member further comprises a collapsible diagonal element extending between said oblique-angled vertices.

26. (original) The prosthesis of claim 25 wherein said one or more valve elements is/are secured to said diagonal elements.

27. (original) The prosthesis of claim 19 wherein said prosthesis is a mitral valve prosthesis.

28. (previously presented) The prosthesis of claim 19 wherein said prosthesis further comprises a plurality of barbs spaced around a periphery of said valve body second end.

29. (original) A percutaneous heart valve replacement system comprising:

a catheter having a catheter first end and a catheter second end;

a prosthesis as defined in claim 19 located in said catheter, said valve body being in a collapsed state and located towards said catheter first end; and

an elongate guide element having a guide element first end and a guide element second end, said guide element first end being detachably attached to said prosthesis and said guide element second end extending beyond said catheter second end.

30. (currently amended) A percutaneous heart valve prosthesis comprising:

a valve body having a first longitudinal extremity defining a valve body first end, and a longitudinally opposing second longitudinal extremity defining a valve body second end, said valve body further having a passage extending along a longitudinal axis between said valve body first end and said valve body second end, said valve being collapsible **from an uncollapsed state to a collapsed state** about said longitudinal axis for delivery via catheter;

one or more flexible valve elements secured to said valve body and extending across said passage for blocking bloodflow in one direction through said passage; and

a plurality of barbs spaced about a periphery of said valve body second end;

wherein said valve body tapers**, in said uncollapsed state,** toward said valve body first end, said valve body first end being sized**, in said uncollapsed state,** to pass through a valve orifice associated with a heart valve to be replaced, said valve body second end being sized**, in said uncollapsed state,** so as not to pass through the valve orifice.

31. (original) The prosthesis of claim 30 wherein said valve body comprises a collapsible valve body frame formed of elongate elastic valve body elements.

32. (original) The prosthesis of claim 31 wherein said valve body frame elements are each formed of a superelastic shape memory material.

33. (original) The prosthesis of claim 31 wherein said valve body frame comprises at least three valve body sub-frame members, each said valve body sub-frame

member having the general form of a deltoid, each said deltoid having acute-angled vertices at said valve body first and second ends, and oblique-angled vertices located between said valve body first and second ends.

34. (original) The prosthesis of claim 33 wherein each said valve body sub-frame member has the general form of a rhombus.

35. (original) The prosthesis of claim 33 wherein adjacent said valve body sub-frame members are joined at respective said oblique-angled vertices.

36. (original) The prosthesis of claim 35 wherein each said sub-frame member further comprises a collapsible diagonal element extending between said oblique-angled vertices.

37. (original) The prosthesis of claim 36 wherein said one or more valve elements is/are secured to said diagonal elements.

38. (original) The prosthesis of claim 30 wherein said prosthesis is a mitral valve prosthesis.

39. (original) A percutaneous heart valve replacement system comprising:

a catheter having a catheter first end and a catheter second end;

a prosthesis as defined in claim 30 located in said catheter, said valve body being in a collapsed state and located towards said catheter first end; and

an elongate guide element having a guide element first end and a guide element second end, said guide element first end being detachably attached to said prosthesis and said guide element second end extending beyond said catheter second end.

40-45 (canceled)

46. (previously presented) A method of treating a failed or failing mitral valve comprising:

advancing a first end of a catheter through the venous system of a patient to be treated into the right atrium of the patient's heart;

creating a puncture in the inter-atrial septum of the heart;

advancing said catheter first end through said puncture, into the left atrium, through the native mitral valve and into the left ventricle of the heart;

locating a prosthesis as defined in claim 19 in said catheter with said valve body in a collapsed state and said valve body second end located between said valve body first end and said catheter first end;

advancing said prosthesis through said catheter until said valve body is released from said catheter first end, thereby expanding said valve body from said collapsed state;

withdrawing said catheter first end through the mitral valve into the left atrium;

withdrawing said valve body toward the left atrium, wedging said valve body in the orifice of the native mitral valve; and

withdrawing said catheter from the patient,

47. (previously presented) A method of treating a failed or failing mitral valve comprising:

advancing a first end of a catheter through the venous system of a patient to be treated into the right atrium of the patient's heart;

creating a puncture in the inter-atrial septum of the heart;

advancing said catheter first end through said puncture, into the left atrium, through the native mitral valve and into the left ventricle of the heart;

locating a prosthesis as defined in claim 30 in said catheter with said valve body in a collapsed state and said valve body second end located between said valve body first end and said catheter first end;

advancing said prosthesis through said catheter until said valve body is released from said catheter first end, thereby expanding said valve body from said collapsed state;

withdrawing said catheter first end through the mitral valve into the left atrium;

withdrawing said valve body toward the left atrium, wedging said valve body in the orifice of the native mitral valve and engaging said prongs with cardiac structure surrounding an end of said orifice; and

withdrawing said catheter from the patient.

48. (canceled)

49. (previously presented) The prosthesis of claim 19, wherein said one direction is a direction from said valve body second end to said valve body first end.

50. (previously presented) The prosthesis of claim 30, wherein said one direction is a direction from said valve body second end to said valve body first end.

51. (new) A percutaneous heart valve prosthesis comprising:

a valve body expandable about a longitudinal axis from a collapsed state to an uncollapsed state, said valve body having longitudinally opposing first and second ends defined in the collapsed state, said valve body defining a passage in the uncollapsed state between said first and second ends, said valve being deliverable via catheter in the collapsed state;

one or more flexible valve elements secured to said valve body and extending across said passage for substantially blocking bloodflow from the second end to the first end through said passage;

wherein said valve body first end being sized in the uncollapsed state to pass through a valve orifice associated with a heart valve to be replaced, said valve body second end being sized in the uncollapsed state so as not to pass through the valve orifice.

52. (new) The prosthesis of claim 51 wherein said valve body comprises a collapsible valve body frame formed of elongate elastic valve body elements.

53. (new) The prosthesis of claim 52 wherein said valve body frame elements are each formed of a superelastic shape memory material.

54. (new) The prosthesis of claim 52 wherein said valve body frame comprises at least three valve body sub-frame members, each said valve body sub-frame member having the general form of a deltoid, each said deltoid having acute-angled vertices at said valve body first and second ends, and oblique-angled vertices located between said valve body first and second ends.

55. (new) The prosthesis of claim 54 wherein each said valve body sub-frame member has the general form of a rhombus.

56. (new) The prosthesis of claim 54 wherein adjacent said valve body sub-frame members are joined at respective said oblique-angled vertices.

57. (new) The prosthesis of claim 56 wherein each said sub-frame member further comprises a collapsible diagonal element extending between said oblique-angled vertices.

58. (new) The prosthesis of claim 57 wherein said one or more valve elements is/are secured to said diagonal elements.

59. (new) The prosthesis of claim 51 wherein said prosthesis is a mitral valve prosthesis.

60. (new) A percutaneous heart valve replacement system comprising:

a catheter having a catheter first end and a catheter second end;

a prosthesis as defined in claim 51 located in said catheter, said valve body being in a collapsed state and located towards said catheter first end; and

an elongate guide element having a guide element first end and a guide element second end, said guide element first end being detachably attached to said prosthesis and said guide element second end extending beyond said catheter second end.

61. (new) A method of treating a failed or failing mitral valve comprising:

advancing a first end of a catheter through the venous system of a patient to be treated into the right atrium of the patient's heart;

creating a puncture in the inter-atrial septum of the heart;

advancing said catheter first end through said puncture, into the left atrium, through the native mitral valve and into the left ventricle of the heart;

locating a prosthesis as defined in claim 51 in said catheter with said valve body in a collapsed state and said valve body second end located between said valve body first end and said catheter first end;

advancing said prosthesis through said catheter until said valve body is released from said catheter first end, thereby expanding said valve body from said collapsed state;

withdrawing said catheter first end through the mitral valve into the left atrium;

withdrawing said valve body toward the left atrium,

wedging said valve body in the orifice of the native mitral valve; and

withdrawing said catheter from the patient.

62. (new) The prosthesis of claim 51 which further comprises a plurality of barbs spaced about a periphery of said valve body second end.

63. (new) The prosthesis of claim 51 wherein said valve body tapers from said valve body second end toward said valve body first end.

64. (new) The prosthesis of claim 54 wherein each said deltoid is substantially planar.

65. (new) The prosthesis of claim 22 wherein each said deltoid is substantially planar.

66. (new) The prosthesis of claim 33 wherein each said deltoid is substantially planar.